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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,539	02/09/2004	Nui Wang	POF 3.9-057 CONT	3237
530	7590	10/20/2006	EXAMINER KING, BRADLEY T	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			ART UNIT 3683	PAPER NUMBER

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/776,539

Applicant(s)

WANG, NUI

Examiner

Bradley T. King

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Schenk et al (US# 50905118).

Schenk et al disclose all the limitations of the instant claims including: a first mounting portion 22 and a second mounting portion 18, said first mounting portion adapted for being disposed adjacent the first side of the disc brake rotor and said second mounting portion adapted for being disposed adjacent the second side of the disc brake rotor; a first brake pad 20 mounted to said first mounting portion and having a first side adapted for engaging the disc brake rotor and a second side opposite to said first side and a second brake pad 16 mounted to said second mounting portion, said first brake pad and said second brake pad being adapted for being positioned adjacent opposite sides of the disc brake rotor in facing relationship therewith; and a hydraulic service brake actuator 28, 36 or 38 and a non-hydraulic electric parking brake actuator 28, 36 or 38 (note column 4, lines 9-16), each of which is operable independently of the other for service brake operation and parking brake operation, respectively, each of said actuators being arranged for actuation against said second side of said first brake pad

Art Unit: 3683

for displacing said first brake pad away from said first mounting portion and into engagement with the disc brake rotor, said hydraulic service brake actuator and said non-hydraulic electric parking brake actuator having positions of actuation on said second side of said first brake pad at positions which are spaced apart.

Regarding claim 4, note actuator 38 is arranged in "the region" of the effective pressure centre as broadly recited.

Regarding claim 5, note actuator 38 is "generally centrally" of the pad as broadly recited.

#### ***Allowable Subject Matter***

Claims 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to disclose the recited bore/rod thread arrangement.

#### ***Response to Arguments***

Applicant's arguments filed 8/08/2006 have been fully considered but they are not persuasive.

Regarding Schenk, it is maintained that the actuators of Schenk are "operable" or capable of operating independently. The claims are directed towards a disc brake caliper. It is maintained that the functional language fails to impart any structure to the claims. Note MPEP 2114. The language, "operable independently of the other for

Art Unit: 3683

service brake operation and parking brake operation" is a property of the brake control system, not a structural feature of the caliper itself. The claims do not set forth any elements or devices that control the manner the actuators are operated. While the actuators of Schenk et al are disclosed as being controlled in unison, the structure of the caliper allows for independent control. If one actuator were actuated without the other, the brake would still function. While Applicant's arguments referencing figure 2 have been considered, it is noted that the modes of operation are that of the controller, the relied upon caliper structure has nothing which would preclude possible independent operation.

Regarding Applicant's arguments that the piezoelectric element is not capable of applying a load sufficient to function as a parking brake, support for this statement cannot be found. Schenk implies that the piezoelectric elements are capable of a larger force. Note that a single piezoelectric element increases the braking force past that of the motors. Figure 2. Also note that figure 4 identifies the motor as element 36. Either the piezoelectric element or the motor can reasonably be considered a non-hydraulic actuator. It is maintained that the rejections are proper.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 3683

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T. King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571) 272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTK

 10/14/06  
**BRADLEY KING**  
**PATENT EXAMINER**